

OIL & GAS - CAA COMPLIANCE ASSISTANCE

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Region 8 IR Camera Survey Findings

Delivered several presentations to regional federal partners about Region 8's IR Camera Survey findings with respect to emissions and gas loss from oil & gas production and midstream activities.

- * Mar 2015 - ONRR management and staff and IG (13)
- * Apr 2015 - Other ONRR management and staff
- * May 2015 - DOJ attorneys and the US Attorney's office (who represent BLM and ONRR in royalty cases)
- * Jul 2015 - Webinar for ~100 BLM staff from field, state and national offices.
- * Jul 2015 - Multi-agency discussion of venting and flaring issues that the US Attorney in Colorado is spearheading. The invited agencies will be EPA, OSHA, BLM, ONRR and DOJ-ENRD.
- * Sep 2015 - DOE ARPA-E MONITOR Team
- * Sep 2015 - OSHA Region 8 and some of their State partners
- * Aug 2016 - OAP & OAQPS R8 IR Survey findings at midstream compressor stations and gas processing facilities
- * Sep 2017 - BLM HQ 3 managers/staff from Training group and Compliance.

OAQPS O&G air rule-writers; OAP GHGRP-W; GHG O&G Emission Inventory

EPA Compliance Alert, "EPA Observes Air Emissions from Controlled Storage Vessels at Onshore Oil and Natural Gas Production Facilities"

Issued September 2015

States can experience a high turnover rate in employees as they move to industry jobs with their experience gained. Training dollars are tight, so webinar-based training, with plenty of opportunity for to-fro discussion is appreciated, helps build bridges, and ultimately can lead to emission reductions as more boots on the ground are made aware of the cause and source of emissions. And we can learn a lot from the states as well by starting this dialogue.

- * Mar 2016 - At MARAMA's (Mid-Atlantic Regional Air Management Association) request in March 2016, I delivered a presentation about EPA's Compliance Alert. There were 58 attendees and seemed well received - attendees and their feedback are provided in Appendix A. This was announced through the National O&G Emission Inventory workgroup and so states outside of MARAMA also listened in including TX and OK.
- * Aug 2016 - Delivered webinar to manager and ~8 staff Environment Climate Change Canada.

- * Oct 2017 - Webinar delivered to New Mexico Environmental Department, Air Quality Bureau - 22 managers and staff from compliance/enforcement, permitting, planning (incl. emission inventory), and technical services.
- * Jan 2018 - CDPHE - Air Pollution Control Division, Oil & Gas Team (1/29/18 planned).
- * Jan 2018 - UK Delegation - Environment Agency in England (date TBD).

EPA 2017 International Emission Inventory Conference

Aug 2017 - Discussed compliance alert in context of broader oil & gas emissions and how they are accounted for in emission inventories.

* Plenary Speaker: "Uinta Basin - Analyses on Emissions Data Sets to Improve 2014 Emission Inventory"

* Participant on Oil and Gas Session Panel Discussion to provide information/create dialogue on improving the 2017 NEI Oil and Gas Tool.

NSPS OOOO Flowcharts

EPA INSPECTOR WIKI - Sponsor State/Tribe Staff to have Access

CO - 3

OH - 1

TX - 1

UT - 1

WY - 7

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Appendix A - MARAMA Webinar - Attendees and Feedback

If there was more than one person attending at a single registration location, please provide the additional names:

- * Whitney Jurenic, Eileen Steilman (MT DEQ)
- * Clinton Krug, PA DEP NCRO Paul Waldman, PA DEP NCRO John Twardowski, PA DEP NCRO
- * Christopher Sorenson WY DEQ
- * just myself to my knowledge from the Pittsburgh office
- * We had 22 attendees in the Oklahoma City office.
- * No, there was a conflicting meeting at NCDAQ so I was the only one attending.
- * Russ Nettles, Paige Sprague, Michael Ege (TX CEQ)
- * Anthony Maxwell (OK DEQ)
- * Dave Shimmel, Colleen Ricci, Paul Waldman, Clinton Krug, Morgan Beacker (PA DEP)
- * Hafeez Ajenifuja, Michael Dorman, David Good, Melissa Jativa, Anthony Sadar, Gregson Vaux (ACHD)

From: Sharon Ray

Sent: Tuesday, March 22, 2016 10:15 AM

To: Julie McDill <jmcdill@marama.org>; Susan Wierman <swierman@marama.org>; Susan McCusker <smccusker@marama.org>; MARAMA Training <training@marama.org>

Subject: Survey Summary for Air Emissions from Oil and Gas Tank webinar

Hi Julie,

We had a very good response to the on-line survey for the EPA presented Air Emissions from Tanks Oil and Gas Productions Facilities webinar that was held on March 3, 2016. Cindy Beeler did an excellent job.

* The photos from Cindy's presentation were very helpful. Cindy's style of presenting was very easy to follow which is nice for a beginner inspector. Erin Malone - EPA

* Very well done. Presenter was very knowledgeable and clear. Tom Hanlon - PA DEP

* Outstanding, informative presentation - Danielle Nesvacil - TX CEQ

* Good, practical info, thanks for providing this. Excellent presenter! Tony Sadar - ACHD

* The details were really helpful. I had read the Compliance Alert last fall, but Cindy's presentation was particularly helpful in reinforcing how widespread these problems are at wellhead sites and compressor stations. Tom Richardson - OK DQ

* Enjoyed Cindy's real world knowledge on the subject, plus photos and FLIR video. John Twardowski - PA DEP

* The webinar provided valuable information that included visuals that will be useful

for compliance and enforcement as well as permitting tanks at natural gas facilities. The Q&A information on representative gas analyses was also very useful for permit application reviews. Edward Orris - PA GOV

There were lots of comments about "the most important thing they learned". The following are just a couple of examples:

* Leak locations to check with the FLIR camera that I didn't think of before. Carla Milinar - WY DEQ

* There are many variations on what can happen at these facilities based on the nature of the fields and the equipment used to process and produce the gas. Each company can do things slightly different than another company. Each facility has to be evaluated on its own merits. Dave Shimmel - PA DEP

* The oil extended hydrocarbon analysis is necessary to perform emissions calculations. Brett Davis -WY

* Peak surge of flash emissions make up the majority of storage vessel emissions. Benjamin Way-WY

* The details were really helpful. I had read the Compliance Alert last fall, but Cindy's presentation was particularly helpful in reinforcing how widespread these problems are at wellhead sites and compressor stations. Tom Richardson - OK DQ

* NC does not yet have any oil or gas permits but may in the future. This webinar is assisting our agency in trying to anticipate air quality issues. Tammy Manning - NC DEQ

* Emphasis on the magnitude of flash emissions and their potential to overwhelm pressure relief valves and thief hatches. Proper maintenance of gaskets, lines (to avoid liquids accumulation and clogging) and proper sizing/design of vapor recovery units and enclosed combustion devices. Considerations for accepting/using a representative gas analysis. Edward Orris - PA DEP

* Condensate storage tank control devices must be sized to account for peak flashing surges to prevent pressure relief venting. Alan Binder - PA DEP

* General awareness of this issue. Also things to look for if, in the future, we need to permit these tanks. JoAnn Truchan - ACHD

* Things to look for during inspections (staining, size of vent line, gasket deterioration, valve position, is vent line underground, etc. James Jarrett - WV DEP

I love surveys where there are lots of comments!

Sharon C. Ray

MARAMA

Please suggest further webinar topics that would be helpful to you:

* Specifics of 40 CFR 60, Subpart OOOO. Dave Aquirre - MT DEQ

* I would have liked to hear more about EPA determinations with NSPS OOOO. Morgan Tucker - OK DEQ

* What is the preferred software to calculate tank emissions? Alex Sandy PA DEP

* Once NSPS OOOOa is final, a summary by EPA would be good. - Carla Milinar - WY DEQ

* NSPS OOOO and the Clean Air Act - Moran Tucker - OK DEQ

* Please keep me on the mailing list! Thank you. Carla Milinar - WY DEQ

* Updates on RICE, turbines. - Dave Shimmel - PA DEP

* Calculating emissions from oil and gas well sites. Brett Davis - WY DEQ

* Storage vessel emissions calculations. Benjamin Way - WY DEQ

* Natural gas wastewater treatment facilities: emissions, permitting considerations,

evaporation, distillation, storage vessels and impoundments. Edward Orris - PA DEP

* Emissions/emission calculations from natural gas processing plants including fugitive component leaks, % control by LDAR programs, fractionator emissions, etc. - Alex Sandy - PA DEP

* Using process simulators (i.e. ProMax, HYSYS) to verify line sizing and design flow rate of VRU systems or other control measures. - Edward Andrews - WV DEP

* Estimation methodologies; reviews of any new regulations or significant changes to existing regulations. JoAnn Truchan - ACHD

* Providence Photonics add-on to the FLIR camera that quantifies vapor leaks. Rebellion Photonics hyperspectral imaging camera that quantified vapor leaks. James Jarrett - WV DEP

* I would hoping to hear EPA explanation of technical issues in using Tanks 4.09. to estimate emissions. Also, I would like to hear about issues with sources using process simulators to predict emissions. Edward Andrews - WV DEP

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